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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,414	07/29/2003	Stephen McNally	200300385-1	7240

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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,414

Applicant(s)

MCNALLY ET AL.

Examiner

Leonard S. Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 1-21, 24 and 28-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22, 23, 25-27 and 52-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 1-21, 24, and 28-51 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08/17/05. Claims 22-27 and 52-55 were elected and will herein be examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

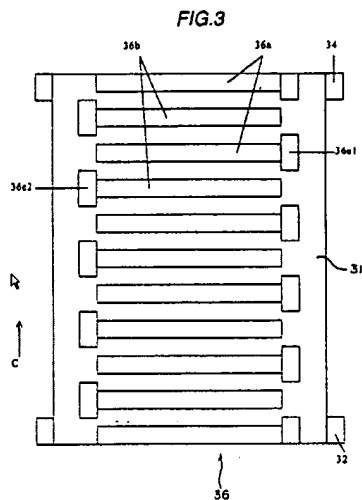
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 52-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanome (US PgPub 20030052955).

Kanome discloses:

- {claim 52} An apparatus for supporting a sheet media; capacitive mat for electrically attractingly supporting the sheet media; and mat controller means for selectively electrically energizing the capacitive mat means in a predetermined sequential order in response to an input (figure 3; paragraphs 0032-0039)



- {claim 53} an electrical first node and an electrical second node; a first plurality of electrical conductors electrically coupled to the first node; and a second plurality of electrical conductors electrically coupled to the second node (figure 3, reference 36e1, 36e2, 36a, 36b)
- {claim 54} wherein the mat controller is configured such that electrically energizing the capacitive mat means in the predetermined sequential order includes at least one of a step change increase in electrical potential, a period of time-increasing electrical potential, or a period of substantially constant electrical potential (paragraph 39)
- {claim 55} wherein the mat controller means is configured to receive the input from an imaging apparatus controller (paragraph 0020)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanome (US PgPub 20030052955).

Kanome discloses:

- {claim 22} A sheet media support apparatus (figure 3); a capacitive mat including first and second nodes, the capacitive mat configured to electrically attractingly support a sheet media (figure 3, reference 31, 36e1, 36e2); a controller coupled to the first and second nodes of the capacitive mat (paragraph 0032-0039)
- {claim 23} wherein the capacitive mat includes a first plurality of electrical conductors electrically coupled to the first node; and a second plurality of electrical conductors electrically coupled to the second node (figure 3, reference 36a, b)
- {claim 25} wherein the capacitive mat defines a curved media support surface (figure 2, reference 31; curves defined by rollers 32, 34, and 35)
- {claim 27} wherein the capacitive mat and the controller are each further configured to cooperate with an imaging apparatus (figure 2, reference 7)

Kanome differs from the claimed invention in that it does not explicitly disclose:

- {claim 22} selectively electrically energize the first node at a step-change positive potential and the second node at a step-change negative potential in

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response to an input; and electrically energize the first node at a time-increasing positive potential and the second node at a time-increasing negative potential

- {claim 26} electrically energize the first node at the time-increasing positive potential and the second node at the time-increasing negative potential for a predetermined period of time; and electrically couple the first node and the second node to a ground reference potential after the predetermined period of time

Though Kanome does not explicitly disclose the claimed means of electrically controlling the mat, Kanome does disclose "As a result of various attempts in attracting and conveying a recording paper by using a comb-teeth electrode, a waveform voltage, which is **changed along with the lapse of time**, is employed in this invention as the voltage applied to each electrode for generating attraction force. In one experiment, for example, an AC voltage biased with a DC bias voltage (various voltages which are combinations of a sinusoidal wave, a triangular wave, a serrate wave, **a square wave**, or a rectified wave of such waveforms, etc.) was supplied to the electrodes to serve as an attraction voltage allowing **the positive electrode to constantly have positive electric potential and the negative electrode to constantly have negative electric potential** (paragraph 0039; emphasis mine). It is well known to one of ordinary skill in the art that a square wave demonstrates a step-change potential change. Thus, in light of this teaching, the claimed invention in claims 22 and 26 is naturally suggested.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Kanome. The motivation for the skilled

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artisan in doing so is to gain the benefit of preventing adherence of ink mist and impact deviation of ink droplets (paragraph 0039).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stowell (US Pat 3220303) discloses a electrostatic printing apparatus.

Taguchi et al (US Pat 5224693) discloses a multistage paper feeding/conveying apparatus and method that uses electro static forces.

Kline et al (US Pat 5530459) discloses a printing media feed and retaining apparatus for a thermal inkjet printer/plotter.

Numata (US Pat 6164761) discloses a sheet adhering conveying apparatus and recording apparatus.

Rasmussen et al (US Pat 6357869) discloses print media vacuum holddown.

Hayashi (US Pat 6375184) discloses a sheet conveying apparatus and image forming apparatus.

Andrew et al (US Pat 4856769) discloses an apparatus for conveying sheets.

Mashtare et al (US Pat 5593151) discloses a self biasing electrostatic paper transport.

Bannai et al (US Pat 5121170) discloses a device for transporting sheet members using an alternating voltage.

Tanno et al (US Pat 6309064) discloses a printing apparatus.

Montenbruck (US Pat 3973770) discloses a paper conveying system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/28/05

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MANISH S. SHAH
PRIMARY EXAMINER

10/31/05